GEOGRAPHICAL RECORD.

THE AMERICAN GEOGRAPHICAL SOCIETY.

CORRESPONDENCE RELATING TO THE ATTAINMENT OF THE NORTH POLE.—In the controversy which has taken place between Commander Robert E. Peary and Dr. Frederick A. Cook, both members of this Society, the Council has not deemed it wise to interfere further than as below stated.

After the newspapers reported that Dr. Cook had reached the Pole, President Huntington telegraphed as follows:

"To DR. FREDERICK A. COOK: On behalf of the American Geographical Society I send you hearty congratulations on your reported attainment of the North Pole.—A. M. HUNTINGTON, President."

On September 7 the following telegram was received:

"To AMERICAN GEOGRAPHICAL SOCIETY: North Pole discovered April 6, 1909, by Peary Arctic Club Expedition under Commander Peary.—BRIDGMAN, Secy."

To which the following reply was made:

"To PEARY ARCTIC CLUB: The members of the American Geographical Society rejoice with you and send heartiest congratulations upon superb achievement.—ARCHER M. HUNTINGTON, President."

Later, when the controversy became heated, President Huntington, after consultation with the President of the American Museum of Natural History, telegraphed to Dr. Ira Remsen, Baltimore, as follows:

"May I urge that you, as President of the National Academy of Sciences, in consideration of the universal desire on the part of the public for definite information which may, with authority, set at rest the uncertainty now existing in the general mind regarding the discovery of the North Pole, appoint a committee of distinguished men of science, geographers and others, for the examination of such documents as Commander Peary and Dr. Cook may desire to submit.—ARCHER M. HUNTINGTON, President."

A similar telegram was sent by the President of the Museum of Natural History.

The following reply was received: "It would be idle for me as President of the National Academy of Sciences to appoint a committee to investigate the North Pole problem unless it were clearly understood that Commander Peary and Dr. Cook are willing to submit their evidence to such a committee. If they are willing to do so I shall not hesitate to appoint such a committee as you suggest.—IRA REMSEN, President, National Academy of Sciences."

The situation was then explained to Messrs. Peary and Cook, and both agreed to submit all records and data to the National Academy of Sciences. Dr. Cook, however, almost immediately withdrew his consent, stating that he had already definitely agreed to submit his material first to the University of Copenhagen. Of course, this released Commander Peary from his agreement. Since then it

has not been considered expedient for the American Geographical Society to take any part or action in the matter.

The Academy of Sciences is composed of men of science and is organized expressly for the purpose of examining and reporting upon scientific questions. Had it been able to report on this question, its decision would have been absolutely convincing, for each of the contestants would undoubtedly have been invited to be present, explain his own data, and comment upon those of the other.

MEETING OF THE SOCIETY.—A regular meeting of the Society was held at the Engineering Societies' Building, No. 29 West Thirty-ninth Street, on Tuesday, November 23, 1909, at 8.30 o'clock P. M.

Vice-President Greenough in the chair.

The following persons, recommended by the Council, were elected to Fellowship:

Charles Altschul,
Francis R. Appleton,
Samuel Sloan Auchincloss,
Miss Ida Benjamin,
F. E. Bond,
James Boyd,
Belmore H. Browne,
Hermon C. Bumpus,
B. Ogden Chisolm,
Erastus M. Cravath,
Bernardino José de Sauza,
Alessandro Fabbri,
Felix Frank,
Childs Frick,
Franklin H. Giddings,
Francis B. Griffin,
Charles W. Harkness,
Robert Hawxhurst, Jr.,
William Herbert,
J. TenBroeck Hillhouse,
Arthur L. Holland,
Wilson S. Howell,
George D. Hurst,
Henry I. Judson,
Robert C. Kammerer,
H. R. Kunhardt, 3d.,
George M. Landers,
Paul A. Larned,
Emlen N. Lawrence,
William W. Lawrence,
George Leask,
Ivy L. Lee,
Charles H. Leland,
William M. Lybrand,
Robert H. McCurdy,
D. T. MacDougal,
George B. Markle,
Alfred E. Marling,
John S. Melcher,
Edward P. Mitchell,
R. Burnham Moffat,
Frederick I. Monsen,
William S. Montgomery,
Quincy L. Morton,
Frank A. Munsey,
Franklin Murphy, Jr.,
Robert L. Neill,
Henry A. Neilson,
Walter Nuffort,
Dudley Olcott,
French E. Oliver,
Henry Fairfield Osborn,
George Foster Peabody,
Curt G. Pfeiffer,
Frederic Pruyn,
Edward W. Screven,
James H. Tibbits,
José M. Tristan,
Cleto Gonzalez Viquez,
M. A. Wolff.

The Chairman then introduced Dr. Frederick Jones Bliss, who addressed the Society on "A Palestine Pilgrimage."

Stereopticon views were shown.

On motion, the Society adjourned.

NORTH AMERICA.

MAMMOTH CAVE COMPLETELY SURVEYED.—Dr. Horace C. Hovey has an article in the *American Antiquarian* (Vol. 31, No. 3, pp. 145-7, 1909) on new explorations in Mammoth Cave, Ken., systematically and skillfully carried out by Mr. Max Kaemper in 1908. He was assisted by his guide, Edward Bishop. He was engaged in the work for eight months. Guided in his first subterranean visits by Dr. Hovey's map of 1907, he made his way to Hovey's Cathedral and discovered that there are at least three different ways to this locality besides the routes formerly followed. Then he pressed beyond the Cathedral to new domes, pits and grottoes. More than once, he came across the name of Creighton carved on the limestone—a man unknown to the cave owners. In honour of this unknown explorer, he named a large room "Creighton's Dome." To another room, beyond it, he gave his sister's name calling it "Gerta's Grotto." Permission was finally given him to go ahead and make a complete survey of the entire cavern, and this was accordingly done.

Dr. Hovey met him at the cave in November last. He describes Mr. Kaemper as "an honest young German, about 23 years old, an admirable draftsman, a fearless and capable explorer and one ready to answer any questions put to him." He said the dimensions of the cave were too great to warrant measurements other than by pacing, to which he had been trained in the German military service. He had taken no barometric observations. He used a good surveyor's compass for taking bearings in the main cave and principal branches, but relied on a pocket compass for the narrower passages and crawlways. Though Bishop, the guide, was constantly with him, he relied wholly on his own bearings and distances for direction and never once lost his reckoning.

His plan was to take the Main Cave and the Long Route as a kind of base line, from which to branch out in every direction. In every instance, he followed each passage to its remotest end, completing his sketch as he went along. He has made a map of the entire cave, but the management, for prudential reasons, decline, for the present, to permit it to be published. They, however, permitted Dr. Hovey, in the revision of his guide map for 1909, to consult the explorer.

HISTORICAL DIAGRAM OF THE GRAND AND OTHER CAÑONS.—Mr. Robert Brewster Stanton C.E., M.E., who, in 1889-90, carried out the Survey for the "Denver, Colorado Cañon and Pacific Railway" organized by the unfortunate Frank M. Brown, has prepared an interesting and valuable "Diagram Showing the History of the Exploration, Navigation and Survey, of the Grand and other Cañons of the Colorado River of the West from 1540 to 1908." The complete record of navigation of the Lower Colorado River below the Grand Cañon is not intended to be given. Those of Alarçon, Johnson, and Ives are given because they were the most prominent. Nor does the diagram "attempt to give the names of every trapper or hunter that has been to the Colorado, but only the real expeditions that have explored, surveyed, and navigated the river in boats through the Great Cañons."

From this standpoint the record is complete. The diagram, therefore, presents a skeleton history of this extraordinary river in a graphic and lucid manner. The stream is drawn from Green River, Wyoming, to the Gulf of California, with the names of the various explorers bracketted on the sides and connected in their proper relation by arrow indicators with the river in such a way that the information is conveyed at a glance.

The first name in point of time, to be associated with these cañons is that of

one "D. Julien, 1836," which, in recent years, has been found cut into the rock walls in three places between the San Rafael and the end of Cataract Cañon. Who Julien was and what became of him is a mystery. The first complete descent was the famous one of Major John Wesley Powell in 1869, from Green River, Wyoming to the Virgin River. The story that one James White made the descent from the San Juan in 1869 which is given in most of the older cyclopedias, was never believed by those who knew the river and Mr. Stanton recently has found James White still living and secured from him the exact story which proves that White was never on the river above the lower end of the Grand Cañon. As numerous persons have wrongly claimed connection with one or the other of these exploring expeditions this diagram has a corroborative value entirely separate from its historical importance. F. S. D.

GOLD IN GEORGIA.—The Second *Report* on the "Gold Deposits of Georgia" has just been published at Atlanta, by the Geological Survey of Georgia as *Bull.* 19 (283 pp., maps, illustrations and index). Most of the volume is given to descriptions of the individual properties with preliminary chapters on the history and statistics of the industry, the different types of deposits and their geographical and geological distribution. Before 1849, the southern Appalachian gold fields, in which the Georgia deposits are important, were the scene, almost exclusively, of our gold mining industry. The Georgia mines were largely abandoned, with the rush to California and the discovery of other Western gold regions. It was not till several years after the Civil War that gold mining revived in Georgia. From the early discoveries there till 1909, the gold product of the State has amounted to about $17,500,000. With the gradual introduction of modern methods, deep mining and the treatment of refractory ores have become a permanent industry. Most of the metal, in the early years, was derived from placer deposits and the mining of free milling ore.

NEW STATE GEOLOGICAL SURVEYS.—The Legislature of Tennessee has established a State geological survey and appropriated for its support $15,000 for each of the years 1910 and 1911. Plans have been adopted for the inauguration of the work, next year.

The State of Washington has made an appropriation for a geological survey and appointed Prof. Henry Landes, State geologist. It will have the coöperation of the Federal Survey in topographic mapping and the study of the water resources and coal fields.

GEOLOGY AND GEOGRAPHY AT CORNELL.—The Trustees of Cornell University have reorganized the departments of geology and geography and divided them into five coördinate departments. These are geology, in charge of Prof. Henry S. Williams, who is also director of the museum; physical geography, in charge of Prof. Ralph S. Tarr; stratigraphic geology, in charge of Prof. Gilbert D. Harris; economic geology, in charge of Prof. Heinrich Ries; and mineralogy and petrography in charge of Prof. A. Capen Gill. Professor Gill will also be chairman of the five departments.

AFRICA.

ANTHROPOLOGICAL SURVEY OF THE SUDAN.—Mr. A. C. Haddon, University Lecturer in Ethnology at Cambridge, England, writes to *Nature* (No. 2,086), that

the Anglo-Egyptian Administration is organizing an ethnographical survey of the Sudan. The Government is awake to the fact that the people cannot be well governed or educated unless the authorities have clearer knowledge of their psychology and of their customs, ceremonies, ideas and ideals. The Sudan Government has, therefore, appropriated sufficient money to carry on anthropological investigations for two years and to publish the results. Dr. and Mrs. Seligmann have been appointed to conduct these investigations. They will at once begin the study of the Dinkas and Shilluks in the Upper Nile Province, and are expected to extend their work to the pagan Nubas of Southern Kordofan and possibly to some other tribes.

CLIMATE OF THE MOUNT KENIA REGION.—In the *Scottish Geographical Magazine* for July, 1909, an account of "A Visit to Mt. Kenia" contains some notes on climate which are of interest in that they come from a little-known region. Mt. Kenia, East Africa, is almost on the equator. Its altitude is 17,150 feet. It has fifteen glaciers. The writer says that "the Kenia snows can now be reached in little more than a month from England, by way of Mombasa and the Uganda Railway." A persistent northeast wind was noted at an altitude of about 20,000 feet, but no statement is made as to how this direction was determined. On the mountain itself, between 7,000 and 14,000 feet, the atmosphere was singularly calm. Diurnal mountain and valley winds occurred, towards the mountain by day and away from it by night. It appears, therefore, that the effect of the forest-clad slopes, and of the snow and ice, is not sufficiently marked to produce the diurnal downflow of air which has been noted in the case of snow-covered mountains, even on the equator. Below 7,000 feet, and on the plains, the southeast trade blew strongly by day. The climate of the northern highlands, between 10,000 and 12,000 feet, is mild and equable. "It was not only pleasant and healthful, but extraordinarily exhilarating." The writer enthusiastically says that "this great uninhabited plateau, so singularly beautiful and so eminently a white man's country, suggests itself naturally as the site for the future capital city of the British tropical possessions in mid-Africa—the Bogotá of the Old World. Here Europeans could lead active healthy lives and preserve the energy and vigour of their race, as they have for 350 years on the equatorial highlands of the Andes." There is a great contrast, during at least half the year, between the wet and misty southern slopes of Kenia and the dry plateau country to the north. On Kenia, December, January and February are the dry months; March, April and May the rainy months, and June, July and August the "misty season."

R. DEC. W.

GEOLOGICAL SURVEY OF THE CAPE OF GOOD HOPE.—The Thirteenth *Ann. Rep.* of the Geological Commission (for 1908) announces good progress with survey work in the field. Eleven of the 52 sheets of the survey map have been published, but years must elapse before full information regarding the geology of the colony will be available. The Commission has been somewhat embarrassed by the lowering of the grant made by the Government for 1908. A number of papers give the latest information on the geology of various fields in the Colony.

ASIA.

THE DUKE OF THE ABRUZZI'S ATTEMPT TO ASCEND K 2.—Signor Civinini, who accompanied the Duke of the Abruzzi on his journey to the Karakoram Chain of

the Himalaya, in the northeastern part of Cashmere, has given these details of the attempt to reach the summit of Mount Godwin Austen, which the India Survey designates as K 2. For years, this mountain, whose height had been fixed by triangulation at 28,250 feet, was supposed to be the second highest summit in the world, but the latest determination of the height of the taller of the two peaks of Kinchinjunga, in the eastern Himalaya, seems to show that Godwin Austen holds third rank.

The great summit was approached by the Duke's party from Askole, the last settlement at the foot of the Karakoram, where the natives are living at an elevation of 9,840 feet above the sea. The party was accompanied by 350 native porters. On May 18 last, a station was erected at Rdokass from which point the attack on K 2 began. On May 21, the Duke, with 10 selected porters and 4 European mountain guides, broke camp, for four days they struggled through snow and ice, and on May 25 they had K 2 immediately before them. On the next day, the ascent began with the temperature at 50° F. and the fog so thick that only now and then was the mountain mass revealed. About noon, on the following day, the weather cleared and they saw plainly that it would be impossible to reach the summit from the southwest side on account of the steepness of the glacier and snow-covered slope above them.

The party was then divided into several detachments which circumvented the mountain to find, if possible, a place where the ascent might be made. These efforts were fruitless and at a height of over 19,000 feet the Duke was compelled to give up the attempt. About a month was then spent in topographic surveying and photographing in the neighbourhood of the mountain.

Chogolisa, or Bride Peak, which is somewhat lower than K 2, was next attacked and, though the top could not be reached, the party attained a height of 24,600 feet, which is the highest ascent yet made. At a height of 21,550 feet, the Duke and his six companions were completely enveloped in fog, but he and three Alpine guides, Petigax and the two Brocherels, struggled on to the higher point where they were compelled to retreat.

CARTOGRAPHY.

THE MAP OF THE WORLD IN 1:1,000,000.—At the Fifth International Geographical Congress, in Bern, in 1891, the map-making nations were invited, on the proposal of Professor Albrecht Penck, to coöperate in the production of a general map of the world on a uniform scale of 1:1,000,000, or 15.78 statute miles to an inch. No agreement between these nations as to a uniform plan for carrying out this idea has ever been made, but in mapping their own or other countries, the official cartographic departments of Germany, France, England and the United States have produced a considerable number of map sheets on this scale as parts of the general plan. Thus, the Service géographique de l'Armée in Paris has mapped parts of Asia, China and Africa on this scale; the Königlich-Preussische Landesaufnahme in Berlin, eastern China; the Intelligence Division of the War Office, London, some of the British African possessions.

The Eighth International Geographical Congress in New York, in 1904, proposed to the Government of the United States, the execution of a general map of America on the same scale. Mr. Henry Gannett, geographer of the U. S. Geological Survey, began the preparation of such a map of our country and considerable progress had been made in 1905 (*Bulletin*, Vol. 37, pp. 730-32). But still, there

was no uniformity among these maps made by the cartographers of several countries, in many details of their production.

At the Ninth Congress in Geneva, last year, a committee was formed which reported conclusions as to the conventional signs and other detail to be used on the map. This action was taken in response to a communication from Mr. Gannett. Among the more important of these conclusions were the following: Each sheet to cover an area of 4° in latitude and 6° in longitude; the meridians to be reckoned from Greenwich; the projection to be polyconic; the altitudes to be given in meters, also in feet, if desired; and the contour interval to be commonly 200 meters, with variations in flat and in mountainous regions.

It was recently decided that the best way to arrive at a full understanding would be through a meeting of delegates from the various countries. The British Government, therefore, sent out invitations to the United States, Austria-Hungary, France, Germany, Italy, Japan, Russia and Spain for a meeting in London on Nov. 16, to arrange for the standardization of the international map.

Messrs. Bailey Willis and S. J. Kubel of the U. S. Geological Survey, went to London as the representatives of the United States. The British delegates consist of representatives of Great Britain, Canada, Australia and India. At this conference the various details essential to an agreement on the preparation of a uniform map were to be discussed. The results of the conference are not yet at hand.

POLAR.

RASMUSSEN'S NEXT WORK IN ARCTIC AMERICA.—This Danish explorer, who spent the past season in Greenland and its neighbourhood, has planned another ethnological expedition. He expects to start next spring or, if delayed, in 1911, on a three years' journey with dog sledges through the Arctic archipelago north of this continent for the study of the Eskimo who are scattered over that region. He will chiefly follow Amundsen's route westward and hopes to carry his work as far as Alaska.

VARIOUS.

A NEW GEOGRAPHY.—In a paper by R. D. Oldham, formerly Superintendent of the Geological Survey of India, entitled "A New Geography" (*Geog. Jour.*, Aug., 1909), he suggests that the most workable definition of geography is indicated by the etymological meaning of the word, as the science which deals with the description or delineation of the earth. The old geography, however, concerned itself only with the surface of the earth, for there was no possibility of knowing what took place in its interior till the progress of the study of earthquakes enabled us to arrive at some definite knowledge of its constitution. The new seismology, therefore, has prepared the way for a new geography, which is concerned with the delineation of the interior of the earth. He then briefly reviews some of the most important results, thus far, of the study of earthquakes, and expresses the opinion that the problem of the constitution of the earth seems at last in a fair way towards solution and that we may expect rapidly increasing knowledge concerning it.

PHILIP'S GEOGRAPHICAL PICTURES.—German publishers of geographical material

have been especially enterprising in the production of series of pictures to illustrate geographical teaching in the class room. The most notable and the handsomest of these series are the "Geographische Characterbilder" published by Hölzel of Vienna, of which some of the latest examples were shown in the educational exhibition given in the house of the Society, a year ago. Other and cheaper series serve a useful purpose. The latest publication of the kind has recently been issued by G. Philip & Son, London. The set of 20 black and white plates, each 20 by 14½ inches, is sold at 21s. for the set and 1s. 3d. per plate. All of them are reproductions from photographs, excellent as well as instructive, and most of them admirably adapted to illustrate the facts they were designed to teach. Thirteen of the plates are entitled "Land Forms," with subsidiary headings showing the kinds of forms as "Sedimentary Rocks," "Volcanic Work," "Ice Work," and "River Work." The remaining plates illustrate climate and vegetation, with views of a desert road, date culture, cattle ranching, wheat harvest, tea picking, rice culture, and sugar cultivation. Mr. P. H. L'Estrange, assistant master at Malvern College, has supplied the text under each view, naming the locality pictured, explaining the more important features shown and asking questions pertinent to the topic illustrated. The tendency of such fine pictures as these is, undoubtedly, to enliven the class-room exercise and to be helpful in the elucidation of many phases of geography.

PERSONAL.—Prof. *H. F. Cleland,* of Williams College, spent July and August in studying the geological features of Wolff Co., Ky., and of the Forest Reserve south of Flagstaff, Ariz., also visiting the Grand Canyon of Arizona, the Yosemite and Canadian Rockies.—Mr. *R. H. Chapman* has received from the U. S. Geological Survey leave of absence for a year to engage in topographic work in Canada, the Canadian Geological Survey having requested the loan of a topographer.—Prof. *R. S. Tarr,* of the department of geology, Cornell University, has sailed for Europe to spend his sabbatical year.—Mr. *W. O. Hotchkiss* and Mr. *F. T. Thwaites* are compiling a new geological map of Wisconsin.—Mr. *E. H. J. Lorenz* is making a physiographic model of Wisconsin on a scale of 7 miles to an inch, showing the topographic forms, copies of the model to be distributed among the Wisconsin schools.—Prof. *T. A. Jagger,* of the Massachusetts Institute of Technology, spent the past summer in Japan studying earthquake phenomena.—Prof. *R. A. Daly* visited the Hawaiian Islands last summer for earthquake studies.—Prof. *C. H. Hitchcock,* of Dartmouth College, has just issued his book "The Volcanoes of Hawaii," from the press of the Hawaiian Gazette Co., Honolulu. He sailed for the Territory of Hawaii on Oct. 20.—President *C. R. Van Hise,* of the University of Wisconsin, will give a course of instruction, in the present school year, on the conservation of national resources.—Mr. *Henryk Arctowski,* the Antarctic explorer and meteorologist of the Royal Observatory, Uccle, Belgium, is visiting this country.—Mr. *F. Holm,* who recently went to Shensi, China, where he made a replica of the famous Nestorian tablet, is now lecturing in this country and will return to Denmark in December to address the Royal Geographical Society at Copenhagen.